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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,618

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05/29/2009

EXAMINER

NELSON, MICHAEL B

ART UNIT

PAPER NUMBER

1794

NOTIFICATION DATE

DELIVERY MODE

05/29/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

chicago.patents@klgates.com

Office Action Summary	Application No. 10/595,618	Applicant(s) DURAND ET AL.	
	Examiner MICHAEL B. NELSON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3 and 5-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendments filed on 03/20/09 have been entered. Claims 2 and 4 are cancelled and claims 1, 3 and 5-24 are currently under examination on the merits. Applicant's amendments have resulted in the withdrawal of several 112 2nd paragraph issues however some remain.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 6-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 6 recites the phrase "substantially incompressible" which renders the claim indefinite in that it is unclear what qualifies as "substantially incompressible." In addition to the relative uncertainty given to the term by the phrase "substantially" the examiner notes that all PET bottles exhibit some degree of compression when being squeezed by hand (i.e. it is unclear how much compression is permissible under the current limitations). Also, there is inadequate definition to ascertain under what conditions this testing (i.e. the squeezing of the bottle) would be taken. Various independent factors would affect the resiliency of a bottle (the type of liquid in the bottle, how much head space there is, how good of a seal is on the bottle, how much the bottle is pressurized and how much force is being applied to the bottle).

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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 1, 3, 5-11, 13-19 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideaki et al. (JP 2001-122237), see translation, in view of Beck et al. (U.S. 5614148) with evidentiary support from Hutchinson et al. (U.S. 2003/0031814).

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8. Regarding claims 1, 3, 5-11, 13-19 and 21-24, Hideaki et al. discloses a bottle for packaging a liquid beverage product (Fig. 1 and [0001]). The bottle is formed by stretch blow molding [0008] and given that the general inventive concept is for reduced thickness walls as a result of the stretching, the stretch would take place at higher than normal stretch ratios. The bottle has a neck, which functions as a closing means and a distribution means, side walls and a bottom (Fig. 1). The bottle is disclosed as having ribs at intervals along the wall to provide deformation strength ([0006]) and in general the filled bottle would be substantially incompressible by hand. The diameter of the neck is smaller than the diameter of the wall portions (Fig. 1). Also the container is made of PET ([0002]).

Hideaki et al. does not explicitly disclose the presence of feet in the bottle. Beck et al. discloses a bottle bottom configuration with five separate feet (Fig. 5), which facilitates improved stability when the bottle is placed vertically onto a flat surface (See Abstract). The inventions of both Hideaki et al. and Beck et al. are drawn to the field of blow molded PET bottles and therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to have modified the unspecified bottom of the bottle of Hideaki et al. by using the bottom configuration as taught by Beck et al. with its multiple legs for the purposes of imparting improved stability when the bottle is placed vertically onto a flat surface.

Regarding the thickness limitations, Hideaki et al. discloses that the walls, 3, to the bottom, 4, have a thickness of between 20 and 50 micrometers while the un-stretched neck portion has a thickness of between 200 and 500 micrometers ([0007]-[0010]). Hideaki et al. does not disclose a thickened bottom portion as instantly claimed. Beck et al. shows that a structurally resilient bottom portion structure. The thickness of the wall portions, D1, and the tip

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of the feet, B, are relatively thin compared to the thickness in between the feet portions, A, (Fig. 3). The added thickness in the bottom portion provides extra stability to the bottle for when the bottle is set down on a table or dropped on the floor (i.e. one having ordinary skill in the art would find it obvious that the bottom of a bottle benefits from added structural support).

Hideaki discloses that the bottle of his invention has two wall thicknesses: a structurally stable wall thickness of 0.2-0.3 mm (i.e. for the shoulders of the bottle as seen in Fig. 1 and 2) and a ultra thin thickness of 0.02-0.05 (See Claim 1). Hence to create the structurally stable bottom portion for the bottle of Hideaki (as would be obvious to one having ordinary skill as explained above) the wall thickness of 0.2-0.3 mm would be used in the thicker bottom portions (i.e. in between the feet) and the wall thickness of 0.02 to 0.05 would be used for the thinner portions (i.e. the feet and the container walls). Moreover, while Beck et al. shows the general structure of the bottom of a container, the exact thicknesses of the various portions of the container would have been adjusted by one having ordinary skill in the art to provide both adequate structural support and still reduce the cost to manufacture as much as possible.

Regarding the volume per gram of PET of the bottle of modified Hideaki et al, while modified Hideaki et al. does not explicitly mention that the volume/gram is within the claimed range, given the disclosure towards using less resin to achieve equivalent volume containment ([0003]), and given the substantially similar wall thickness, one having ordinary skill in the art would optimize the volume of the container in relation to the amount of PET used in the container by altering the shape and wall thickness of the container in order to reduce production costs of the container.

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Regarding the weight ratio of the weight of the wall section compared to the weight of the bottom section, while modified Hideaki et al. does not explicitly state that his bottle has a ratio which falls within the claimed range, one having ordinary skill in the art would have optimized the weight of the wall portion of the container to the bottom portion of the container as part of the general design process for determining the shape and wall thickness of various parts of the container, (as explained above).

While modified Hideaki does not explicitly disclose the semi-crystalline nature of the PET used in their bottles, one having ordinary skill in the art of blow molded PET bottles would realize that semi-crystalline PET is conventionally used for blow molding operations due to its advantageous rheological properties (See for example Hutchinson et al., [0007]).

The bottle of modified Hideaki has a greater section in that there is a maximum diameter of the bottle along its walls.

Additionally, Hideaki et al. discloses that the walls, 3, to the bottom, 4, have a thickness of between 20 and 50 micrometers while the un-stretched neck portion has a thickness of between 200 and 500 micrometers ([0007]-[0010]). Beck et al. discloses that each foot part has an increased thickness part (Fig. 3, A, and Table 1). Blow molded bottles of the type in Hideaki et al. and Beck et al. are designed to hold beverages (i.e. liquid). When filled with such a liquid and closed, the bottle of modified Hideaki et al. would be designed under the conventional requirement of beverage containing blow molded bottles to be substantially highly resistant to the loads typically associated with handling and shipping (i.e. incompressible), including those recited in instant claim 9. The body of the bottle has a substantially cylindrical shape (Fig. 1).

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Numerous external aesthetic adornments, including pad printing of images or indicia, would be obvious to one having ordinary skill as providing increased commercial appeal.

Regarding the ratio of the diameter of the body to the neck (including the maximum diameter of the body, i.e. d_1 to d_2), one having ordinary skill in the art would have adjusted, through routine experimentation, the ratio of the neck opening to body diameter in order to control the aesthetic appeal of the finished bottle and in order to optimize the speed at which the bottle could empty its liquid contents and the total time required for the bottle to empty its contents.

Regarding the ratio of the height of the neck and the height of the body, one having ordinary skill in the art would have adjusted, through routine experimentation, the height ratio of the neck to the body in order to control the aesthetic appeal of the finish bottle and in order to optimize the total volume of the container in relation to the strength of the closure mechanism of the bottle (i.e. the higher the neck length the more area there is for engagement between the twist top type closure commonly associated with blow molded PET bottles and the bottle itself).

9. Claims 12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hideaki et al. (JP 2001-122237), see translation, in view of Beck et al. (U.S. 5614148) with evidentiary support from Hutchinson et al. (U.S. 2003/0031814), as applied to claims 4 and 6 above, and further in view of Schaupp et al. (U.S. 2002/0185212).

Regarding claims 12 and 20, modified Hideaki discloses all of the limitations as set forth above. Modified Hideaki does not explicitly disclose that the bottles be adorned with printed images. Schaupp et al. discloses an apparatus which allows for the pad printing ([0014]) of bottles (See Abstract) which one having ordinary skill in the art would appreciate to be

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advantageous because the printed image results in improved aesthetic appeal to the consumer.

Hence it would have been obvious to have pad printed images onto the bottle of modified

Hideaki as taught by Schaupp et al.

Response to Arguments

10. Applicant's arguments filed on 03/20/09 are considered moot in light of the new grounds of rejection provided above which were necessitated by applicant's amendments. Arguments which are still deemed to be relevant are addressed below.

11. Regarding applicant's arguments against the prior art references teaching the weight ratio of the walls to the bottom, as explained above, this ratio would be one of many variables effected by the optimization of the bottle shape and thickness which would be obvious to one having ordinary skill as part of the process of providing a bottle which is structurally sound and yet still uses as little material as possible. The relative volume of the container to the amount of material used would also be affected by the design of the bottle.

12. The examiner notes that the thickness and weight of the various parts of the bottle (i.e. the walls, the bottom, the feet etc.) are not clear because these various regions on the bottle are not clearly delineated. In PET bottles the walls generally transition into the bottom which transitions into the feet. Limitations which compare the qualities of the walls to the bottom are not well defined since it is not clear where the walls end and the bottom begins and therefore a bottle structure's ability to read on these limitations would be affected by how the measurer decides to define the various parts of the bottle.

13. Applicant cites the degree of crystallinity, however the examiner notes that the degree of crystallinity is not instantly recited in the claims. Moreover, it is not clear that a specific degree

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of crystallinity would be necessary to achieve the properties as instantly claimed (i.e. the properties could be achieved merely by the obvious optimization of the structure of the bottle as explained above).

14. Regarding the thickness limitations, as explained above, using the thicknesses of Hideaki et al. to produce the general structure of Beck et al. would produce a structure which reads on the instant claims.

Conclusion

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL B. NELSON whose telephone number is (571) 270-3877. The examiner can normally be reached on Monday through Thursday 6AM-4:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571) 272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 1794

/MN/
05/13/09